Response to Comments to the Technical Review
RCRA Corrective Action Program

Quarterly Progress Report No. 65 4th Quarter 2016

Bristol-Myers Squibb Manufacturing Company
Humacao, Puerto Rico

June 14, 2017

Comments on the RCRA Corrective Action Program
Quarterly Progress Report No. 65 1st Quarter 2017
Bristol-Myers Squibb Manufacturing Company
Humacao, Puerto Rico

I. GENERAL COMMENTS

1. C9-C10 aromatics, C9-C12 aliphatics, C11-C22 aromatics, C19-C36 aliphatics, C9-C18 aliphatics were systematically detected at low-levels (i.e., above the method detection limit (MDL) but below the reporting limit (RL)) in the laboratory method blanks and as a result several sample results were qualified with a B-flag. The Release Assessment Quality Assurance Project Plan (QAPP) Worksheets #28-5 and #28-6 indicate that the laboratory was directed to conduct corrective action when the contaminants of concern results are greater than the MDL. All of the analytical batches for the volatile petroleum hydrocarbons (VPH) and extract petroleum hydrocarbon (EPH) analyses for the 3rd Quarter 2016 were affected by this method blank contamination; yet the laboratory case narratives do not mention corrective action undertaken. BMSMC should work with the analytical laboratory to seek out the potential source(s) of method blank contamination and resolve this issue for future rounds of sampling and analysis.

   BMSMC Response:

   Multiple interactions with the SGS/Accutest laboratory in Massachusetts have taken place to discuss the presence of low levels of C9-C10 Aromatics, C11-22 Aromatics, C9-C12 Aliphatics, C9-C18 Aliphatics, and C19-C36 Aliphatics detected in laboratory method blanks. In order to address this issue, it was decided that analysis for these petroleum fractions would be conducted by SGS/Accutest laboratories located in Florida starting with the March 2017 quarterly sampling. No B-flag issues related to petroleum fraction method blank contamination were noted in the March 2017 analytical results.

2. The Release Assessment QAPP Worksheet #36 does not specify the validation procedure for VPH and EPH analysis. However, the data validation reports in Appendix A of the RCRA Corrective Action Program Quarterly Progress Report No. 65 4th Quarter 2016 indicate that the B-flag applied by the laboratory due to method blank contamination was retained for all the associated sample results regardless of the sample concentration. Typically, during data validation the B-flag is removed if the sample concentration is greater than five times the method blank concentration because the sample concentration is not considered an artifact of the method blank contamination at that level. Also note that B-flag results are of concern for data usability as B-flagged data are not considered usable data for risk assessment. Thus, it

is encouraged that BMSMC re- evaluate B-flagged data and remove the B-flags where the sample concentration is greater than fives the method blank concentration.

BMSMC Response:

The B-flagged data have been re-evaluated and the B-flags have been removed. **Tables 1 – 4** have been revised and are included as **Attachment 1** to this Response to Comments. Updated data validation packages are included as **Attachment 2**.

II. SPECIFIC COMMENTS

Tables 1 through 4

3. Several non-detect sample results (e.g., benzene result for MW-19) presented on Tables 1 through 4 had elevated detection limits above the U.S. EPA maximum contaminant level (MCL) or U.S. EPA Regional Screening Levels (RSLs) due to sample dilution. These sample results should also be shaded and footnotes provided which indicate that the elevated detection limit exceeds the MCL or RSL due to the presence of other target analytes that required sample dilution.

BMSMC Response:

Attached **Tables 1 – 4** have been revised with shading and footnotes added to identify when elevated detection limits exceed an MCL or RSL due to the presence of other target analytes that required sample dilution and are included as **Attachment 1**.

Attachment B 3rd Quarter 2016 Groundwater Sampling Field Data Sheets

Copies of the field logbook were provided in Attachment B, but many of the pages were not legible. Since legible field logbooks are an essential data verification element and part of the project file, BMSMC should remind the field crew to write clearly in the logbooks during future field activities.

BMSMC Response:

Documentation provided in Attachment B of Quarterly Progress Report No. 65 includes well purging forms, water level measurements, calibration logs and forms, and logbook notes. USEPA's comments appear limited to certain of the thirteen pages of the logbook notes. Prior to initiating the June 2017 quarterly groundwater sampling, AMAI's remedial project

manager met with the groundwater sampling field team and stressed the importance of clear and legible field logbook notes. AMAI's remedial project manager will continue to monitor field logbooks for legibility going forward.